

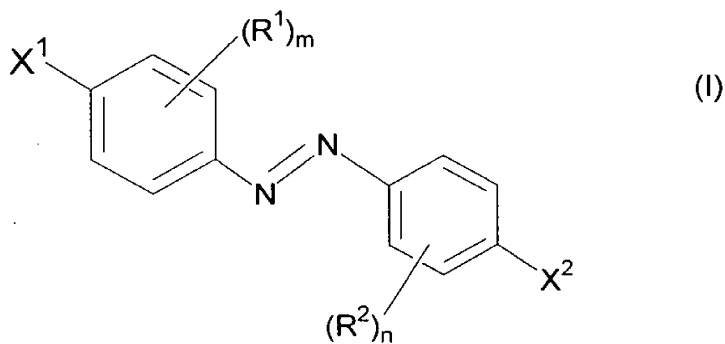
### AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings of claims in the application.

### Listing Of Claims:

Claims 1 - 21. (Cancelled)

Claim 22. (New) A method of using a recording material for a holographic volume storage medium containing at least one dye which changes its spatial arrangement when a hologram is recorded and optionally at least one shape –anisotropic grouping, where the dye permits the recording of at least three holograms at one specimen position , with the proviso that the recording material has an irradiated



thickness of 1.0 mm to 5 cm. and at least one dye has an absorption maximum of the  $\pi\pi^*$  band that is less than or equal to 400 nm and the dye conforming structurally to formula (I)

wherein

$R^1$  and  $R^2$  each independently of the other represents hydrogen or a non ionic substituent, and

$R^1$  may additionally represent  $-X^{1'}-R^3$ ,

m and n each independently of the other represents an integer from 0 to 4,

$X^1$  and  $X^2$  represent  $-X^{1'}-R^3$  and  $X^{2'}-R^4$ , respectively, and

$X^{1'}$  and  $X^{2'}$  represent a direct bond,  $-O-$ ,  $-S-$ ,  $-(N-R^5)-$ ,  $-C(R^6R^7)-$ ,  $-(C=O)-$ ,  $-(CO-O)-$ ,  $-(CO-NR^5)-$ ,  $-(SO_2)-$ ,  $-(SO_2-O)-$ ,  $-(SO_2-NR^5)-$ ,  $-(C=NR^8)-$  or  $-(CNR^8-NR^5)-$ ,

$R^3$ ,  $R^4$ ,  $R^5$  and  $R^8$  each independently of the others represents hydrogen,  $C_1$ - to  $C_{20}$ -alkyl,  $C_3$ - to  $C_{10}$ -cycloalkyl,  $C_2$ - to  $C_{20}$ -alkenyl,  $C_6$ - to  $C_{10}$ -aryl,  $C_1$ - to  $C_{20}$ -alkyl- $(C=O)-$ ,  $C_3$ - to  $C_{10}$ -cycloalkyl- $(C=O)-$ ,  $C_2$ - to  $C_{20}$ -alkenyl- $(C=O)-$ ,  $C_6$ - to  $C_{10}$ -aryl- $(C=O)-$ ,  $C_1$ - to  $C_{20}$ -alkyl- $(SO_2)-$ ,  $C_3$ - to  $C_{10}$ -cycloalkyl- $(SO_2)-$ ,  $C_2$ - to  $C_{20}$ -alkenyl- $(SO_2)-$  or  $C_6$ - to  $C_{10}$ -aryl- $(SO_2)-$ , or

$X^{1'}-R^3$  and  $X^{2'}-R^4$  may represent hydrogen, halogen, cyano, nitro,  $CF_3$  or  $CCl_3$ ,

$R^6$  and  $R^7$  each independently of the other represents hydrogen, halogen,  $C_1$ - to  $C_{20}$ -alkyl,  $C_1$ - to  $C_{20}$ -alkoxy,  $C_3$ - to  $C_{10}$ -cycloalkyl,  $C_2$ - to  $C_{20}$ -alkenyl or  $C_6$ - to  $C_{10}$ -aryl.

Claim 23. (New) The method of Claim 22 further comprising angle-dependent reading of a volume hologram.